Sprague Operating Resources LLC
Waldo County
Searsport, Maine
A-97-71-L-A (SM)

Departmental
Findings of Fact and Order
Air Emission License
Amendment #1

FINDINGS OF FACT

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

1. Sprague Operating Resources LLC (Sprague) was issued Air Emission License A-97-71-J-R/A on May 21, 2013, permitting the operation of emission sources associated with their petroleum storage/distribution and bulk materials handling facility.

2. Sprague has requested an amendment to their license to add a 4.89 MMBtu/hr, 500 kW, non-emergency, distillate-fired generator.

3. The equipment addressed in this license is located at Trundy Road, Searsport, ME.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Generator

Equipment	Design Heat Input MMBtu/hr	Firing Rate gal/hr	kW	Fuel Type, % sulfur	Date of Manuf/ Install	Stack #
Generator TEMP	4.89	35.7	500	distillate, 0.0015	2011/ 2015	3

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396, diesel fuel oil numbers 1 or 2, as defined in ASTM D975, kerosene, as defined in ASTM D3699, biodiesel as defined in ASTM D6751, or biodiesel blends as defined in ASTM D7467.

D. Application Classification

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels (TPY)
PM	7.5	8.2	0.7	100
PM_{10}	7.5	8.2	0.7	100
SO_2	39.5	39.6	0.1	100
NO_x	38.9	43.1	4.2	100
CO	2.8	3.5	0.7	100
VOC	0.3	0.3	0.0	50
CO_2e	<100,000	<100,000	<100,000	100,000

This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Non-Emergency Generator

Sprague operates one, non-emergency generator – Generator TEMP – a genset consisting of an engine and an electrical generator. Generator TEMP has an engine rated at 4.89 MMBtu/hr, firing distillate at a maximum rate of 35.7 gallons per hour, and venting to dedicated Stack #3. The generator was manufactured in 2011 and installed in 2015, and is Tier 4 Interim certified.

1. BACT Findings

The BACT emission limits for Generator TEMP are based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu, 06-096 CMR 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	- 1.08 lb/MMBtu, Tier 4i standard
CO	- 0.19 lb/MMBtu, Tier 4i standard
VOC	- 0.029 lb/MMBtu, Tier 4i standard
Opacity	- 06-096 CMR 101

The BACT emission limits for the generator are the following:

Unit	Pollutant	lb/MMBtu
Generator TEMP	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator TEMP	0.59	0.59	0.01	5.27	0.94	0.14

Visible emissions from the distillate-fired generator shall not exceed 20% opacity on a six (6)-minute block average, except for no more than two (2), six (6)-minute block averages in a three (3)-hour period.

2. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the engine listed above as the unit was ordered after July 11, 2005 and manufactured after April 1, 2006.

40 CFR Part 60, Subpart IIII Requirements:

(1) Manufacturer Certification Requirement

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(a)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 CFR §60.4207(a)]

(3) Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Sprague that are approved by the engine manufacturer. Sprague may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

3. National Emission Standards for Hazardous Air Pollutants (HESHAP)

By meeting the requirements of 40 CFR Part 60, Subpart IIII, Generator TEMP also meets the applicable requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ. [40 CFR Part 63, § 63.6590(c)(1)]

C. Annual Emissions

1. Total Annual Emissions

Sprague shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on an annual fuel limit of 1,000,000 gallons of #6 fuel fired in the boilers, 100 hours per year operation of the emergency generator for maintenance and readiness testing, and 2000 hours per year operation of Generator TEMP.

Total Licensed Annual Emissions for the Facility
Tons per year
(used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers	7.5	7.5	39.4	37.5	2.5	0.1
Generator #1	0.1	0.1	0.1	0.3	0.1	0.1
Generator TEMP	**0.6**	**0.6**	**0.1**	**5.3**	**0.9**	**0.1**
Total TPY	**8.2**	**8.2**	**39.6**	**43.1**	**3.5**	**0.3**

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO_2e).

The quantity of CO_2e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-97-71-L-A subject to the conditions found in Air Emission License A-97-71-J-R/A, and the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following Specific Condition (23) shall be added to current Air Emission License A-97-71-J-R/A:

(23) **Generator TEMP**

A. Generator TEMP is licensed to operate 2000 hours per year, firing distillate fuel with a sulfur content not to exceed 0.0015% by weight. Compliance with the sulfur limit shall be based on fuel purchase receipts from the supplier, including quantity and sulfur content of each purchase.

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator TEMP	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator TEMP	0.59	0.59	0.01	5.27	0.94	0.14

D. Visible Emissions

Visible emissions from Generator TEMP shall not exceed 20% opacity on a six (6)-minute block average, except for no more than two (2), six (6)-minute block averages in a continuous three (3)-hour period. [06-096 CMR 101]

E. Generator TEMP shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:

1. Manufacturer Certification

   The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]

2. Ultra-Low Sulfur Fuel

   The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 CFR §60.4207(b) and 06-096 CMR 115]

3. Operation and Maintenance

   The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Sprague that are approved by the engine manufacturer. Sprague may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

DONE AND DATED IN AUGUSTA, MAINE THIS 22 DAY OF May , 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-91-71-J-R\A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 04/22/2015
Date of application acceptance: 04/27/2015

Date filed with the Board of Environmental Protection:

Filed
MAY 22 2015
State of Maine
Board of Environmental Protection

This Order prepared by N. Lynn Cornfield, PE, Bureau of Air Quality.